Application No.: Not Yet Assigned

Docket No.: 20506/0203371-US0

JC17 Rec'd PCT/PTO 20 SEP 2005 AMENDMENTS TO THE CLAIMS

(Currently Amended) An electrode for an electric operation device, comprising:

 a hollow electrode being formed in a hollow tube shape extended long extending from a
 closed tip;

and having an insulation-coating on the an outside surface of the hollow electrode except a beginning at a predetermined length of from the closed tip side;

a refrigerant tube, having a smaller diameter than a diameter of the hollow electrode, and being inserted into the hollow electrode, the refrigerant tube configured to supply supplying refrigerants for that cool cooling a living tissue in contact contacting with the closed tip and of the hollow electrode into the hollow electrode, and further configured to externally discharging discharge the heat-exchanged refrigerants from the living tissue through the a gap between the refrigerant tube and the hollow electrode;

at least one first hole formed on the outside surface of the hollow electrode where the insulation coating has not been formed, for within the predetermined length from the closed tip;

the first hole operable to externally discharging some of discharge a portion of the refrigerants supplied through the refrigerant tube from the hollow electrode; and

- a flow control means mechanism formed on the outside surface of the hollow electrode where the insulation coating has not been formed, within the predetermined length from the closed tip, and operated as a operable to act as a discharge resistance to the refrigerants discharged from the first hole, for so as to controlling control a flow of the refrigerants.
- 2. (Original) The electrode of claim 1, wherein the hollow electrode is conductive, and power is eternally applied through the hollow electrode.
- 3. (Currently Amended) The electrode of claim 1, further comprising:
 a saline solution pipe being inserted onto the outside surface of the hollow electrode
 with a predetermined gap, and having an insulation coating on the outside surface except a within
 the predetermined length of from the closed tip side;

the saline solution pipe <u>operable to infusing infuse</u> a saline solution through the gap, and <u>discharge</u> the saline solution through at lease one second hole formed on the outside

surface where the insulation coating has not been formed located within the predetermined length from the closed tip.

4. (Currently Amended) The electrode of claim 3, wherein the hollow electrode and the saline solution pipe are conductive, <u>further comprising:</u>

a power source operable to apply different power is applied to the hollow electrode and the saline solution pipe;

and an insulation member for preventing formed on the surface of the hollow electrode and configured to prevent short circuit by of the saline solution supplied through the gap between the hollow electrode and the saline solution pipe is formed on the surface of the hollow electrode.

- 5. (Original) The electrode of claim 4, wherein the insulation member comprises an insulation coating formed on the surface of the hollow electrode, and an insulation packing provided between the hollow electrode and the saline solution pipe.
- 6. (Currently Amended) The electrode of any one of claims claim 1 to 5, wherein the closed tip of the hollow electrode is a conductive speardhead spear head, and the hollow electrode and the spearhead are incorporated with each other.
- 7. (Currently Amended) The electrode of any one of claims claim 1 to 5, wherein the flow control means mechanism is a hollow tube being inserted onto the outside surface of the hollow electrode where the insulation coating has not been formed, and having at least one a third hole on the outside surface, the flow control means mechanism controlling a volume of the discharged refrigerants by alternately installing the first hole of the hollow electrode and the third hole of the hollow tube, and operating as a discharge resistance to the refrigerants discharged from the first hole.
- 8. (Original) The electrode of claim 7, wherein compression units of the hollow tube are formed in a zigzag shape on a discharge passage of the first hole, the third hole and both ends of the hollow tube, and operated as discharge resistances to the refrigerants discharged from the first hole, for controlling the volume of the discharged refrigerants.

9. (Currently Amended) The electrode of any one of claims claim 1 to 5, wherein the flow control means mechanism is a porous metal sintered body layer formed on the outside surface on the hollow electrode where the insulation coating has not been formed within the predetermined length from the closed tip:

the sintered body layer being operated as a operable to discharge resistance to the refrigerants discharged from the first hole for so as to controlling a control volume of the discharged refrigerants.

- 10. (New) The electrode of claims 2, wherein the closed tip of the hollow electrode is a conductive spear head, and the hollow electrode and the spearhead are incorporated with each other.
- 11. (New) The electrode of claims 3, wherein the closed tip of the hollow electrode is a conductive spear head, and the hollow electrode and the spearhead are incorporated with each other.
- 12. (New) The electrode of claims 4, wherein the closed tip of the hollow electrode is a conductive spear head, and the hollow electrode and the spearhead are incorporated with each other.
- 13. (New) The electrode of claims 5, wherein the closed tip of the hollow electrode is a conductive spear head, and the hollow electrode and the spearhead are incorporated with each other.
- 14. (New) The electrode of claim 2, wherein the flow control mechanism is a hollow tube inserted onto the outside surface of the hollow electrode where the insulation coating has not been formed, and having a third hole on the outside surface, the flow control mechanism controlling a volume of the discharged refrigerants by alternately installing the first hole of the hollow electrode and the third hole of the hollow tube, and operating as a discharge resistance to the refrigerants discharged from the first hole.

15. (New) The electrode of claim 3, wherein the flow control mechanism is a hollow tube inserted onto the outside surface of the hollow electrode where the insulation coating has not been formed, and having a third hole on the outside surface, the flow control mechanism controlling a volume of the discharged refrigerants by alternately installing the first hole of the hollow electrode and the third hole of the hollow tube, and operating as a discharge resistance to the refrigerants discharged from the first hole.

- 16. (New) The electrode of claim 4, wherein the flow control mechanism is a hollow tube inserted onto the outside surface of the hollow electrode where the insulation coating has not been formed, and having a third hole on the outside surface, the flow control mechanism controlling a volume of the discharged refrigerants by alternately installing the first hole of the hollow electrode and the third hole of the hollow tube, and operating as a discharge resistance to the refrigerants discharged from the first hole.
- 17. (New) The electrode of claim 5, wherein the flow control mechanism is a hollow tube inserted onto the outside surface of the hollow electrode where the insulation coating has not been formed, and having a third hole on the outside surface, the flow control mechanism controlling a volume of the discharged refrigerants by alternately installing the first hole of the hollow electrode and the third hole of the hollow tube, and operating as a discharge resistance to the refrigerants discharged from the first hole.
- 18. (New) The electrode of claim 2, wherein the flow control mechanism is a porous metal sintered body layer formed on the outside surface on the hollow electrode within the predetermined length from the closed tip:

the sintered body layer operable to discharge resistance to the refrigerants discharged from the first hole so as to control a volume of the discharged refrigerants.

19. (New) The electrode of claim 3, wherein the flow control mechanism is a porous metal sintered body layer formed on the outside surface on the hollow electrode within the predetermined length from the closed tip:

the sintered body layer operable to discharge resistance to the refrigerants discharged from the first hole so as to control a volume of the discharged refrigerants.

20. (New) The electrode of claim 4, wherein the flow control mechanism is a porous metal sintered body layer formed on the outside surface on the hollow electrode within the predetermined length from the closed tip:

the sintered body layer operable to discharge resistance to the refrigerants discharged from the first hole so as to control a volume of the discharged refrigerants.